



DEPARTMENT OF DEFENSE

Office of the Secretary

[Transmittal No. 21-64]

Arms Sales Notification

AGENCY: Defense Security Cooperation Agency, Department of Defense (DoD).

ACTION: Arms sales notice.

SUMMARY: The DoD is publishing the unclassified text of an arms sales notification.

FOR FURTHER INFORMATION CONTACT: Neil Hedlund at neil.g.hedlund.civ@mail.mil or (703) 697-9214.

SUPPLEMENTARY INFORMATION: This 36(b)(1) arms sales notification is published to fulfill the requirements of section 155 of Public Law 104-164 dated July 21, 1996. The following is a copy of a letter to the Speaker of the House of Representatives, Transmittal 21-64 with attached Policy Justification and Sensitivity of Technology.

Dated: March 27, 2023.

Aaron T. Siegel,

Alternate OSD Federal Register Liaison Officer,

Department of Defense.



DEFENSE SECURITY COOPERATION AGENCY
201 12TH STREET SOUTH, SUITE 101
ARLINGTON, VA 22202-5408

December 10, 2021

The Honorable Nancy Pelosi
Speaker of the House
U.S. House of Representatives
H-209, The Capitol
Washington, DC 20515

Dear Madam Speaker:

Pursuant to the reporting requirements of Section 36(b)(1) of the Arms Export Control Act, as amended, we are forwarding herewith Transmittal No. 21-64, concerning the Navy's proposed Letter(s) of Offer and Acceptance to the Government of Greece for defense articles and services estimated to cost \$2.5 billion. After this letter is delivered to your office, we plan to issue a news release to notify the public of this proposed sale.

Sincerely,

A handwritten signature in blue ink, reading "Jedidiah P. Royal", is positioned above the printed name.

Jedidiah P. Royal
Acting Director

Enclosures:

1. Transmittal
2. Policy Justification
3. Sensitivity of Technology
4. Section 620C(d) Certification

Notice of Proposed Issuance of Letter of Offer
Pursuant to Section 36(b)(1)
of the Arms Export Control Act, as amended

(i) Prospective Purchaser: Government of Greece

(ii) Total Estimated Value:

Major Defense Equipment*	\$1.5 billion
Other	<u>\$1.0 billion</u>
TOTAL	\$2.5 billion

Funding Source: National Funds

(iii) Description and Quantity or Quantities of Articles or Services under Consideration for Purchase: The Government of Greece has requested to buy equipment and services to repair, update, and enhance their four (4) existing Hellenic Navy (HN) MEKO Class frigates. These upgrades will include the following:

Major Defense Equipment (MDE):

Eight (8) Close in Weapon Systems (CIWS) Phalanx BLK 1B Baseline 2 Upgrade Kits
Four (4) MK 45, 5" 54 Caliber Gun Overhauls
Four (4) MK 49 Guided Missile Launcher Systems
Four (4) COMBATSS-21 Combat Management Systems
Four (4) AN/SQS-56 Sonar Overhauls

Non-MDE:

Also included is the repair and/or upgrade of existing systems; ordnance; testing; training; systems integration; follow-on technical support; acquisition, upgrades, and overhaul of Narwhal 20A Gun System; Sylena MK 2 Decoy Launching System with CANTO torpedo countermeasure; Radar/Fire Control TRS-4D; Identification Friend or Foe (IFF) Mode 5; NIXIE SLQ-25 Surface Ship Torpedo Defense System; Helicopter Handling System (Repairs); Defense Advance GPS Receiver (DAGR); Gun Computer System (GCS); Low Frequency Active Towed Sonar (LFATS); Compact Low Frequency Active Passive Variable Depth Sonar-2 (CAPTAS-2); Infrared Search & Track System (IRST); Elta Electronic Warfare (EW), with C-ESM, R-ESM, and ECM capability; Naval Laser-Warning System (NLWS); 7 meter Rigid Hull Inflatable Boat (RHIB); SQQ-89 ASW System; Fire Control Radar System; Improved Point Detection System-Lifecycle Replacement (IPDS-LR); Enhanced Maritime Biological Detection (EMBD), as well as significant Hull, Mechanical and Electrical upgrades, replacements, and repairs; support and test equipment; spare and repair parts; communications equipment, including Link 16 communications equipment; Battlefield Information Collection and Exploitation System (BICES); AN/SRQ-4 Tactical Common Datalink (TCDL); Global Command and Control System-Joint (GCCS-J); Air Defense Systems Integrator (ADSI); cryptographic equipment including SY-150, SY-117G, and KYV-5M; software delivery and support; publications and technical documentation; personnel training and training equipment; U.S. Government and contractor engineering, systems integration, technical, and logistics support services; test and trials support; studies and surveys; and other related elements of

logistical and program support.

(iv) Military Department: Navy (GR-P-LJO)

(v) Prior Related Cases, if any: None

(vi) Sales Commission, Fee, etc., Paid, Offered, or Agreed to be Paid: None known

(vii) Sensitivity of Technology Contained in the Defense Article or Defense Services Proposed to be Sold: See Attached Annex

(viii) Date Report Delivered to Congress: **December 10, 2021**

*As defined in Section 47(6) of the Arms Export Control Act.

POLICY JUSTIFICATION

Greece – MEKO Class Frigate Modernization

The Government of Greece has requested to buy equipment and services to repair, update, and enhance their four (4) existing Hellenic Navy (HN) MEKO Class frigates. These upgrades will include the following: eight (8) Close in Weapon Systems (CIWS) Phalanx BLK 1B Baseline 2 upgrade kits; four (4) MK 45, 5" 54 caliber gun overhauls; four (4) MK 49 Guided Missile Launcher Systems; four (4) COMBATSS-21 Combat Management Systems; and, four (4) AN/SQS-56 Sonar overhauls. Also included is the repair and/or upgrade of existing systems; ordnance; testing; training; systems integration; follow-on technical support; acquisition, upgrades, and overhaul of Narwhal 20A Gun System; Sylena MK 2 Decoy Launching System with CANTO torpedo countermeasure; Radar/Fire Control TRS-4D; Identification Friend or Foe (IFF) Mode 5; NIXIE SLQ-25 Surface Ship Torpedo Defense System; Helicopter Handling System (Repairs); Defense Advance GPS Receiver (DAGR); Gun Computer System (GCS); Low Frequency Active Towed Sonar (LFATS); Compact Low Frequency Active Passive Variable Depth Sonar-2 (CAPTAS-2); Infrared Search & Track System (IRST); Elta Electronic Warfare (EW), with C-ESM, R-ESM, and ECM capability; Naval Laser-Warning System (NLWS); 7 meter Rigid Hull Inflatable Boat (RHIB); SQQ-89 ASW System; Fire Control Radar System; Improved Point Detection System-Lifecycle Replacement (IPDS-LR); Enhanced Maritime Biological Detection (EMBD), as well as significant Hull, Mechanical and Electrical upgrades, replacements, and repairs; support and test equipment; spare and repair parts; communications equipment, including Link 16 communications equipment; Battlefield Information Collection and Exploitation System (BICES); AN/SRQ-4 Tactical Common Datalink (TCDL); Global Command and Control System-Joint (GCCS-J); Air Defense Systems Integrator (ADSI); cryptographic equipment including SY-150, SY-117G, and KYV-5M; software delivery and support; publications and technical documentation; personnel training and training equipment; U.S. Government and contractor engineering, systems integration, technical, and logistics support services; test and trials support; studies and surveys; and other related elements of logistical and program support. The estimated total cost is \$2.5 billion.

This proposed sale will support the foreign policy and national security objectives of the United States by helping to improve the security of a NATO ally, which is an important partner for political stability and economic progress in Europe.

The proposed sale will improve Greece's capability to meet current and future threats by providing an effective combatant deterrent capability to protect maritime interests and infrastructure in support of its strategic location on NATO's southern flank. This acquisition, which will be awarded to the winner of an international competition for the Hellenic Navy (HN) MEKO Class Frigate Upgrade, will enhance stability and maritime security in the Eastern Mediterranean region and contribute to security and strategic objectives of NATO and the United States. Greece contributes to NATO operations in Kosovo, as well as to counterterrorism and counter-piracy maritime efforts. Greece will have no difficulty absorbing these articles and services into its armed forces.

The proposed sale of this equipment and support will not alter the basic military balance in the region.

The principal contractors will be Raytheon Missiles and Defense, Waltham, MA; Lockheed Martin, Bethesda, MD; BAE Systems, Arlington, VA; and VSE Corporation, Alexandria, VA. There are no known offset agreements in connection with this potential sale.

Implementation of this proposed sale will require the assignment of 3 additional U.S. Government and (5) contractor representatives, Full-Time Equivalent (FTE) positions to Greece.

There will be no adverse impact on U.S. defense readiness as a result of this proposed sale.

Transmittal No. 21-64

Notice of Proposed Issuance of Letter of Offer
Pursuant to Section 36(b)(1)
of the Arms Export Control Act

Annex
Item No. vii

(vii) Sensitivity of Technology:

1. The MEKO Class Frigate Modernization (Upgrades) will provide Greece with an increased ability to identify, engage, and defeat maritime security threats in open waters of the Mediterranean and Aegean Seas (NATO's Southern Flank). These enhancements will deliver protection-in-depth for Greece's industrial infrastructure and sea lines of communication.

a. Close in Weapon Systems (CIWS) MK 15 Phalanx BLK 1B Baseline 2 Upgrade Kits is a close-in weapon system for defense against incoming threats such as small boats, surface torpedoes, anti-ship missiles and helicopters. It was designed and manufactured by the General Dynamics Corporation, Pomona Division later a part of Raytheon. The upgraded MK 15 Phalanx 1B Baseline 2 improves detection performance, increases reliability, and reduces maintenance. It also has a surface mode to track, detect, and destroy threats closer to the water's surface, increasing the ability to defend against fast-attack boats and low-flying missiles.

b. MK 45, 5"54 Caliber Gun overhaul by performing a Standard Pier-Side Maintenance & Repair (SPMR) of the MK 45 Gun Systems. The MK 45 Gun is a fully-automatic naval gun mount employed against surface (Anti-Surface Warfare – ASuW), air (Anti-Air Warfare – AAW), and land attack (Naval Surface Fire Support – NSFS) targets.

c. MK 49 Guided Missile Launching System (GMLS) is used to deploy the Rolling Airframe Missile (RAM).

d. COMBATSS-21 is the ship's battle management system, which is produced by Lockheed Martin and derived from the USN's latest AEGIS combat management system. The COMBATSS-21 Combat Management System is the backbone of the Freedom-variant self-defense suite and integrates the radar, electro-optical infrared cameras, gun fire control system, countermeasures and short-range anti-air missiles.

e. Upgrading the existing AN/SQS-56 Sonar is accomplished by replacement of defective transducers and staves and upgrading the electronics in the Hull Mounted Sonar as well as the SQS-56 adjunct processor. The AN/SQS-56 is a modern hull-mounted sonar. The sonar is an active/passive, preformed beam, digital sonar providing panoramic echo ranging and panoramic (DIMUS) passive surveillance. A single operator can search, track, classify and designate

multiple targets from the active system while simultaneously maintaining anti-torpedo surveillance on the passive display.

f. The 20mm Narwhal gun system is a gyro-stabilized mount armed with a 20mm automatic cannon, an electro-optic, charge-coupled device camera, and a closed loop, fire-control system, which can be controlled remotely to enable system operation, target acquisition and tracking, and fire opening by the gun operator. Optional add-ons include a thermal camera, laser rangefinder and target automatic tracking video system. The 20mm gun has a firing rate of 800 rounds per minute of NATO standard ammunition, and is produced by the French Government-owned Nexter Systems.

g. Sylena MK 2 Decoy Launching System with CANTO is a torpedo countermeasure. The Sylena MK 2 launches the CANTO decoy, which generates a high-level, 360-degree acoustic signal to jam the full frequency range of an attacking torpedo. Sylena MK 2 is available internationally from Lacroix; CANTO from Naval Group.

h. TRS-4D radar is a three-dimensional, air volume surveillance radar with fast target alert, which provides target designation to the combat management system for anti-air warfare (AAW) and anti-surface warfare (ASuW). The TRS-4D radar is manufactured by Hensoldt a German company. It provides sensor support for surface gun fire control with splash detection, ship-controlled helicopter approach support, jammer detection, tracking and suppression, cued search with enhanced detection performance for a dedicated sector, cued track with high-accuracy target tracking for missile guidance, and target classification, integrated IFF, and is integrated with the combat management system. The system is available internationally through Hensoldt.

i. Identification Friend or Foe (IFF) Mode 5 is an identification system designed for command and control. It enables military and national (civilian air traffic control) interrogation systems to identify aircraft, vehicles or forces as friendly. Mode 5 provides a cryptographically secured version of Mode S and ADS-8 GPS position.

j. AN/ARC-210 GEN 6 (RT-2036(C)) version is a radio that provides two-way, multi-mode voice and data communications with military aircraft over Very High Frequency (VHF) and Ultra High Frequency (UHF) range using U.S. Type 1 encryption. ARC-210 radios contain embedded sensitive encryption algorithms, keying material and integrated waveforms.

k. SY-117G is a combat manpack radio with Type 1 encryption for secure voice communication. In the HN MEKO Upgrade configuration, the radio will be used for interoperable, secure Satellite Communications (SATCOM). The SY-117G COMSEC device is a Controlled Cryptographic Item (CCI).

l. SY-150 is a combat manpack radio with Type 1 encryption. The SY-150 COMSEC device is a CCI.

m. KYV-5M supports tactical secure voice communications. The KYV-5M COMSEC device is a CCI.

n. The Battlefield Information Collection and Exploitation System (BICES) is a web-enabled, multi-national intelligence system that provides near real-time, correlated, situation and order of battle information.

o. Global Command and Control System-Joint (GCCS-J) is a command, control, communications, computers, and intelligence system consisting of hardware, software

(commercial-off-the-shelf and government-off-the-shelf), procedures, standards, and interfaces that provide an integrated near real-time picture of the battlespace necessary to conduct joint and multinational operations. For the HN MEKO Upgrade configuration, GCCS-J will use Type 1 encryption.

p. Air Defense Systems Integrator (ADSI) is a tactical command and control system that integrates land, air and sea domains to report real-time sensor information across the battlespace.

q. The NIXIE SLQ-25 Surface Ship Torpedo Defense System is a digitally controlled, electro-acoustic, soft kill countermeasure decoy system capable of countering wake homing torpedoes, acoustic homing torpedoes, and wire guided torpedoes. NIXIE provides active/passive detection, location, threat identification of torpedoes and other acoustic targets. NIXIE's towed body, the decoy which diverts the threat from the ship, connects to the management system using a fiber optic cable to control the signals emitted by the decoy.

r. Defense Advance GPS Receiver (DAGR) provides secure, military Selective Availability/Anti-Spoofing Module (SAASM)-based GPS in the most reliable and proven handheld form available today. It is a military-grade, dual-frequency receiver, and has the security hardware necessary to decode encrypted P(Y)-code GPS signals. Features include: graphical screen, with the ability to overlay map images, 12-channel continuous satellite tracking for "all-in-view" operation, simultaneous L1/L2 dual frequency GPS signal reception, extended performance in a diverse jamming environment, and SAASM compatibility.

s. The Gun Computer System (GCS) directs the actions of the ship's main gun battery and receives orders for engagement and firing authorization from the Combat Management System. The GCS takes target data from ship sensors for air and surface targets, or operator-entered data for targets ashore, and calculates ballistic solutions and outputs gun positioning orders, ammunition loading and firing orders for the mount.

t. Low Frequency Active Towed Sonar (LFATS) is a low frequency, variable depth sonar used to detect, track and engage submarines. LFATS incorporates active and passive processing with 360-degree coverage. The VDS-100 system is designed for high performance at a lower operating frequency for improved performance.

u. Compact Low Frequency Active Passive Variable Depth Sonar-2 (CAPTAS-2) is a key sensor technology for identifying conventional, diesel-powered submarines operating in difficult sonar environments, such as littoral waters. CAPTAS-2 employs a single winch, which is used to pull the transmit tow body, and receiver array.

v. Infrared Search and Track (IRST) is a 360-degree, panoramic, day and night, passive air and surface surveillance system. The IRST system provides long-range detection with tracking of conventional, asymmetric and emerging threats.

w. Elta Electronic Warfare (EW) suite provides Radar Electronic Support Measures (RESM), Communications Electronics Support Measures (CESM), and Electronic Countermeasures (ECM) with counter-Unmanned Aerial System capability. Elta EW to include C-ESM, R-ESM, and ECM capability. The Elta EW suite is available internationally through ELTA Systems, a subsidiary of Israel Aerospace Industries.

x. Naval Laser-Warning System (NLWS) provides real time situational awareness of laser-based threats to enhance the tactical picture. NLWS interfaces with the ship's CMS, electronic

support measures and onboard countermeasure system. NLWS is available internationally from SAAB.

y. SRQ-4 provides the Tactical Common Data Link (TCDL) to serve COMBATSS-21 for command and control (C2) functions for radar, FLIR and ESM data. Also, as the TCDL terminal on the ship, the AN/SRQ-4 exchanges classified SECRET level acoustic data with the AN/SQQ-89 for real-time shipboard processing of MH-60R deployed sonobuoys, increased sonobuoy processing, updated sonobuoy control and increased ASW tracks. The AN/SQQ-89 accepts MH-60R ASW data and processes the data shipboard as a coordinated tactical ASW picture with the Variable Depth Sonar. ASW Operators, at AN/SQQ-89 consoles, analyze the classified SECRET level data and integrate with COMBATSS-21 to provide full implementation and access to the capabilities of the MH-60R. The MH-60R Multi-Mission Helicopters, procured by the Hellenic Navy under a separate FMS case, introduces dipping sonar, upgraded radar, electronic warfare, weapons including MK 54 torpedoes and external command and control systems. With the MH-60R comes the need for a Ku-Band Common Data Link via a shipboard AN/SRQ-4 Radio Terminal System to support the high data rate requirements associated with aircraft systems.

z. The AN/SQQ-89 Undersea Warfare Combat System is a naval anti-submarine warfare (ASW) system for surface warships. The system presents an integrated picture of the tactical situation by receiving, combining and processing active and passive sensor data from the hull-mounted array, towed array and sonobuoys. The AN/SQQ-89 will interface with the SQS-56 sonar, VDS, SQR-4 and COMBATSS-21. It provides a full range of undersea warfare (USW) functions including active and passive sensors, underwater fire control, onboard trainer and a highly evolved display subsystem.

aa. The Fire Control Radar System is a medium-to-long range radar that interfaces with the Gun Control System (GCS) and COMBATSS-21.

bb. Improved Point Detection System-Lifecycle Replacement (IPDS-LR) is a ship-based Chemical Warfare Agent (CWA) detector designed for chemical detection of chemical warfare agent vapors onboard navy ships. The detector units have special interference rejection built into the detection algorithm and meets specifications for false alarm thresholds with sensitivity requirements. The sampling system includes specially designed sampling lines, filters, and bulkhead adapters to operate in marine environments.

cc. Enhanced Maritime Biological Detection (EMBD) is an automated biological point detection and identification system that provides near real time biological detection, warning, and presumptive identification against Biological Warfare Agents (BWAs). EMBD will provide an early indication that a BWA attack has occurred and provide identification information allowing ship commanding officers to select from an array of countermeasures that can prevent or limit exposure to the ship and other ships in the naval task force.

dd. Link 16 is an advanced command, control, communications, and intelligence (C3I) system incorporating high capacity, jam-resistant, digital communication links for exchange of near real-time tactical information, including both data and voice, among air, ground, and sea elements. It provides the warfighter key theater functions such as surveillance, identification, air control, weapons engagement coordination, and direction for all services and allied forces. With modernized cryptography, Link 16 will ensure interoperability into the future.

2. The overall highest level of classification of defense articles, components, and services included in this potential sale is SECRET.

3. If a technologically advanced adversary were to obtain knowledge of the specific hardware and software elements, the information could be used to develop countermeasures that might reduce weapon system effectiveness, or be used in the development of a system with similar or advanced capabilities.

4. A determination has been made that Greece can provide substantially the same degree of protection for the sensitive technology being released as the U.S. Government. This sale is necessary in furtherance of the U.S. foreign policy and national security objectives outlined in the Policy Justification.

5. All defense articles and services listed in this transmittal have been authorized for release and export to the Government of Greece.

[FR Doc. 2023-06742 Filed: 3/30/2023 8:45 am; Publication Date: 3/31/2023]